



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,792	03/26/2004	Naoya Kobayashi	1417-458	7134

23117 7590 08/28/2006

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

POULOS, SANDRA K

ART UNIT PAPER NUMBER

1714

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,792

Applicant(s)

KOBAYASHI ET AL.

Examiner

Sandra K. Poulos

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/24/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi (US 6,413,639) [= EP 1 088 853] in view of EP 301509.

Kobayashi discloses Mg-Al based hydrotalcite type particles comprising a Mg-Al hydrotalcite core with a coating layer that is a higher fatty acid, organosilane compounds or rosins, wherein the plate surface diameter is from 0.3 to less than 1.0 μm (col 28). The hydrotalcite has a BET value is from 7 to 30 m^2/g and a pH of 7.5 to 9.5 (col 28). The hydrotalcite undergoes heat processing (col 4, lines 23-42). The hydrotalcite is added to a vinyl chloride resin in the amounts given (col 4, lines 30-39).

Kobayashi does not disclose that (1) a surface layer of Mg-Zn-Al based hydrotalcite on the core of the particle and (2) the hydrotalcite has a refractive index being adjustable to a required value in the range of 1.48 to 1.56.

EP 509 discloses a Mg-Zn-Al hydrotalcite for use in synthetic resin films and resin molding compositions (pg 2, lines 1-16). The hydrotalcite improves the blocking resistance and transparency of the synthetic resin, without inconveniently abrading working machines (pg 2, lines 4-19). It would have been obvious to incorporate the hydrotalcite of EP 509 as a surface layer on the particles in Kobayashi in order to improve antiblocking properties (pg 2, lines 4-19; pg 4, lines 42-44). Additionally, it would have been obvious to make the refractive index from 1.48 to 1.55 in order to avoid excessive abrasion characteristics (pg 4, lines 8-16).

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of EP 301509 as applied to claims 1, 3-11 above, and further in view of JP 2000- 290451 (wherein the JPO computer translation is used hereafter, pending full translation).

The discussion with respect to Kobayashi and EP 509 in paragraph 1 above is incorporated herein by reference.

Kobayashi and EP 509 do not discuss the molar ratio of zinc.

JP 451 discloses Mg-Zn-Al hydrotalcite particles combined vinyl chloride resin (abstract). The molar ratio of zinc is 0.001-0.008, which overlaps the lower end of the currently claimed range (abstract). It would have been obvious to one of ordinary skill in the art to use the range of zinc given above so that the particles are not enlarged and allow the composition to have good heat resistance (abstract; para 23).

Art Unit: 1714

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

JP 223 discloses preparing a resin additive that consists of hydrotalcite coated particles (abstract). When compared to with uncoated particles, the coated particles give improved flow, markedly improved abrasion resistance, scratch resistance, and antiblocking properties (abstract).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra K. Poulos whose telephone number is (571) 272-6428. The examiner can normally be reached on M-F 8:00-4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SKP

Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700